

0570
120
01R
12/6/2001

Serial Number: 09/993,059

CRF Processing Date: 12/6/2001
Edited by: [Signature]
Verified by: [Signature] (STIC stat)**ENTERED**

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically:
-
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically:
-
- ☐ Corrected the SEO ID NO when obviously incorrect. The sequence numbers that were edited were:
-
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEO ID NO's edited:
-
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
-
- ☐ Deleted extra, invalid, headings used by an applicant, specifically:
-
- ☒ Deleted: ☒ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file;
☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically:
-
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically:
-
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- ☐ Other: _____
-
-
-

Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

OIPE

RAW SEQUENCE LISTING

DATE: 12/06/2001

PATENT APPLICATION: US/09/993,059

TIME: 13:07:52

Input Set : N:\jumbos\993059.txt

Output Set: N:\CRF3\12062001\I993059.raw

P.S

4 <110> APPLICANT: GARGER, Stephen A.
 5 TURPEN, Thomas H.
 6 KUMAGAI, Monto H.
 8 <120> TITLE OF INVENTION: PRODUCTION OF LYSOSOMAL ENZYMES IN
 9 PLANTS BY TRANSIENT EXPRESSION
 12 <130> FILE REFERENCE: 008010087CPUS06
 C--> 14 <140> CURRENT APPLICATION NUMBER: US/09/993,059
 15 <141> CURRENT FILING DATE: 2001-11-13
 17 <160> NUMBER OF SEQ ID NOS: 37
 19 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 21 <210> SEQ ID NO: 1
 22 <211> LENGTH: 15
 23 <212> TYPE: PRT
 24 <213> ORGANISM: Rice
 26 <400> SEQUENCE: 1
 27 Ser Asn Leu Thr Ala Gly Met Leu Asp Asn Gly Leu Ala Arg Thr
 28 1 5 10 15
 30 <210> SEQ ID NO: 2
 31 <211> LENGTH: 15
 32 <212> TYPE: PRT
 33 <213> ORGANISM: Homo sapiens
 35 <400> SEQUENCE: 2
 36 Asp Ile Pro Gly Ala Arg Ala Leu Asp Asn Gly Leu Ala Arg Thr
 37 1 5 10 15
 39 <210> SEQ ID NO: 3
 40 <211> LENGTH: 1290
 41 <212> TYPE: DNA
 42 <213> ORGANISM: Homo sapiens
 44 <220> FEATURE:
 45 <221> NAME/KEY: CDS
 46 <222> LOCATION: (1)...(1290)
 48 <400> SEQUENCE: 3
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 50 Met Gln Leu Arg Asn Pro Glu Leu His Leu Gly Cys Ala Leu Ala Leu
 51 1 5 10 15
 53 cgc ttc ctg gcc ctc gtt tcc tgg gac atc cct ggg gct aga gca ctg 96
 54 Arg Phe Leu Ala Leu Val Ser Trp Asp Ile Pro Gly Ala Arg Ala Leu
 55 20 25 30
 57 gac aat gga ttg gca agg acg cct acc atg ggc tgg ctg cac tgg gag 144
 58 Asp Asn Gly Leu Ala Arg Thr Pro Thr Met Gly Trp Leu His Trp Glu
 59 35 40 45
 61 cgc ttc atg tgc aac ctt gac tgc cag gaa gag cca gat tcc tgc atc 192
 62 Arg Phe Met Cys Asn Leu Asp Cys Gln Glu Glu Pro Asp Ser Cys Ile
 63 50 55 60
 65 agt gag aag ctc ttc atg gag atg gca gag ctc atg gtc tca gaa ggc 240
 66 Ser Glu Lys Leu Phe Met Glu Met Ala Glu Leu Met Val Ser Glu Gly
 67 65 70 75 80

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Input Set : N:\jumbos\993059.txt

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69	tgg aag gat gca ggt tat gag tac ctc tgc att gat gac tgt tgg atg	288
70	Trp Lys Asp Ala Gly Tyr Glu Tyr Leu Cys Ile Asp Asp Cys Trp Met	
71	85 90 95	
73	gct ccc caa aga gat tca gaa ggc aga ctt cag gca gac cct cag cgc	336
74	Ala Pro Gln Arg Asp Ser Glu Gly Arg Leu Gln Ala Asp Pro Gln Arg	
75	100 105 110	
77	ttt cct cat ggg att cgc cag cta gct aat tat gtt cac agc aaa gga	384
78	Phe Pro His Gly Ile Arg Gln Leu Ala Asn Tyr Val His Ser Lys Gly	
79	115 120 125	
81	ctg aag cta ggg att tat gca gat gtt gga aat aaa acc tgc gca ggc	432
82	Leu Lys Leu Gly Ile Tyr Ala Asp Val Gly Asn Lys Thr Cys Ala Gly	
83	130 135 140	
85	ttc cct ggg agt ttt gga tac tac gac att gat gcc cag acc ttt gct	480
86	Phe Pro Gly Ser Phe Gly Tyr Tyr Asp Ile Asp Ala Gln Thr Phe Ala	
87	145 150 155 160	
89	gac tgg gga gta gat ctg cta aaa ttt gat ggt tgt tac tgt gac agt	528
90	Asp Trp Gly Val Asp Leu Leu Lys Phe Asp Gly Cys Tyr Cys Asp Ser	
91	165 170 175	
93	ttg gaa aat ttg gca gat ggt tat aag cac atg tcc ttg gcc ctg aat	576
94	Leu Glu Asn Leu Ala Asp Gly Tyr Lys His Met Ser Leu Ala Leu Asn	
95	180 185 190	
97	agg act ggc aga agc att gtg tac tcc tgt gag tgg cct ctt tat atg	624
98	Arg Thr Gly Arg Ser Ile Val Tyr Ser Cys Glu Trp Pro Leu Tyr Met	
99	195 200 205	
101	tgg ccc ttt caa aag ccc aat tat aca gaa atc cga cag tac tgc aat	672
102	Trp Pro Phe Gln Lys Pro Asn Tyr Thr Glu Ile Arg Gln Tyr Cys Asn	
103	210 215 220	
105	cac tgg cga aat ttt gct gac att gat gat tcc tgg aaa agt ata aag	720
106	His Trp Arg Asn Phe Ala Asp Ile Asp Asp Ser Trp Lys Ser Ile Lys	
107	225 230 235 240	
109	agt atc ttg gac tgg aca tct ttt aac cag gag aga att gtt gat gtt	768
110	Ser Ile Leu Asp Trp Thr Ser Phe Asn Gln Glu Arg Ile Val Asp Val	
111	245 250 255	
113	gct gga cca ggg ggt tgg aat gac cca gat atg tta gtg att ggc aac	816
114	Ala Gly Pro Gly Gly Trp Asn Asp Pro Asp Met Leu Val Ile Gly Asn	
115	260 265 270	
117	ttt ggc ctc agc tgg aat cag caa gta act cag atg gcc ctc tgg gct	864
118	Phe Gly Leu Ser Trp Asn Gln Gln Val Thr Gln Met Ala Leu Trp Ala	
119	275 280 285	
121	atc atg gct gct cct tta ttc atg tct aat gac ctc cga cac atc agc	912
122	Ile Met Ala Ala Pro Leu Phe Met Ser Asn Asp Leu Arg His Ile Ser	
123	290 295 300	
125	cct caa gcc aaa gct ctc ctt cag gat aag gac gta att gcc atc aat	960
126	Pro Gln Ala Lys Ala Leu Gln Asp Lys Asp Val Ile Ala Ile Asn	
127	305 310 315 320	
129	cag gac ccc ttg ggc aag caa ggg tac cag ctt aga cag gga gac aac	1008
130	Gln Asp Pro Leu Gly Lys Gln Gly Tyr Gln Leu Arg Gln Gly Asp Asn	
131	325 330 335	
133	ttt gaa gtg tgg gaa cga cct ctc tca ggc tta gcc tgg gct gta gct	1056

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Input Set : N:\jumbos\993059.txt

Output Set: N:\CRF3\12062001\I993059.raw

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135          340          345          350
137 atg ata aac cgg cag gag att ggt gga cct cgc tct tat acc atc gca      1104
138 Met Ile Asn Arg Gln Glu Ile Gly Gly Pro Arg Ser Tyr Thr Ile Ala
139          355          360          365
141 gtt gct tcc ctg ggt aaa gga gtg gcc tgt aat cct gcc tgc ttc atc      1152
142 Val Ala Ser Leu Gly Lys Gly Val Ala Cys Asn Pro Ala Cys Phe Ile
143          370          375          380
145 aca cag ctc ctc cct gtg aaa agg aag cta ggg ttc tat gaa tgg act      1200
146 Thr Gln Leu Leu Pro Val Lys Arg Lys Leu Gly Phe Tyr Glu Trp Thr
147 385          390          395          400
149 tca agg tta aga agt cac ata aat ccc aca ggc act gtt ttg ctt cag      1248
150 Ser Arg Leu Arg Ser His Ile Asn Pro Thr Gly Thr Val Leu Leu Gln
151          405          410          415
153 cta gaa aac aca atg cag atg tct tta aaa gac tta ctt taa      1290
154 Leu Glu Asn Thr Met Gln Met Ser Leu Lys Asp Leu Leu *
155          420          425
158 <210> SEQ ID NO: 4
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160 <212> TYPE: PRT
161 <213> ORGANISM: Homo sapiens
163 <400> SEQUENCE: 4
164 Gln Leu Arg Asn Pro Glu Leu His Leu Gly Cys Ala Leu Ala Leu Arg
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166 Phe Leu Ala Leu Val Ser Trp Asp Ile Pro Gly Ala Arg Ala Leu Asp
167 20 25 30
168 Asn Gly Leu Ala Arg Thr Pro Thr Met Gly Trp Leu His Trp Glu Arg
169 35 40 45
170 Phe Met Cys Asn Leu Asp Cys Gln Glu Glu Pro Asp Ser Cys Ile Ser
171 50 55 60
172 Glu Lys Leu Phe Met Glu Met Ala Glu Leu Met Val Ser Glu Gly Trp
173 65 70 75 80
174 Lys Asp Ala Gly Tyr Glu Tyr Leu Cys Ile Asp Asp Cys Trp Met Ala
175 85 90 95
176 Pro Gln Arg Asp Ser Glu Gly Arg Leu Gln Ala Asp Pro Gln Arg Phe
177 100 105 110
178 Pro His Gly Ile Arg Gln Leu Ala Asn Tyr Val His Ser Lys Gly Leu
179 115 120 125
180 Lys Leu Gly Ile Tyr Ala Asp Val Gly Asn Lys Thr Cys Ala Gly Phe
181 130 135 140
182 Pro Gly Ser Phe Gly Tyr Asp Ile Asp Ala Gln Thr Phe Ala Asp
183 145 150 155 160
184 Trp Gly Val Asp Leu Leu Lys Phe Asp Gly Cys Tyr Cys Asp Ser Leu
185 165 170 175
186 Glu Asn Leu Ala Asp Gly Tyr Lys His Met Ser Leu Ala Leu Asn Arg
187 180 185 190
188 Thr Gly Arg Ser Ile Val Tyr Ser Cys Glu Trp Pro Leu Tyr Met Trp
189 195 200 205
190 Pro Phe Gln Lys Pro Asn Tyr Thr Glu Ile Arg Gln Tyr Cys Asn His

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Input Set : N:\jumbos\993059.txt

Output Set: N:\CRF3\12062001\I993059.raw

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191      210      215      220
192 Trp Arg Asn Phe Ala Asp Ile Asp Asp Ser Trp Lys Ser Ile Lys Ser
193 225      230      235      240
194 Ile Leu Asp Trp Thr Ser Phe Asn Gln Glu Arg Ile Val Asp Val Ala
195      245      250      255
196 Gly Pro Gly Gly Trp Asn Asp Pro Asp Met Leu Val Ile Gly Asn Phe
197      260      265      270
198 Gly Leu Ser Trp Asn Gln Gln Val Thr Gln Met Ala Leu Trp Ala Ile
199      275      280      285
200 Met Ala Ala Pro Leu Phe Met Ser Asn Asp Leu Arg His Ile Ser Pro
201      290      295      300
202 Gln Ala Lys Ala Leu Leu Gln Asp Lys Asp Val Ile Ala Ile Asn Gln
203 305      310      315      320
204 Asp Pro Leu Gly Lys Gln Gly Tyr Gln Leu Arg Gln Gly Asp Asn Phe
205      325      330      335
206 Glu Val Trp Glu Arg Pro Leu Ser Gly Leu Ala Trp Ala Val Ala Met
207      340      345      350
208 Ile Asn Arg Gln Glu Ile Gly Gly Pro Arg Ser Tyr Thr Ile Ala Val
209      355      360      365
210 Ala Ser Leu Gly Lys Gly Val Ala Cys Asn Pro Ala Cys Phe Ile Thr
211      370      375      380
212 Gln Leu Leu Pro Val Lys Arg Lys Leu Gly Phe Tyr Glu Trp Thr Ser
213 385      390      395      400
214 Arg Leu Arg Ser His Ile Asn Pro Thr Gly Thr Val Leu Leu Gln Leu
215      405      410      415
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217      420      425
219 <210> SEQ ID NO: 5
220 <211> LENGTH: 1308
221 <212> TYPE: DNA
222 <213> ORGANISM: Homo sapiens
224 <220> FEATURE:
225 <221> NAME/KEY: CDS
226 <222> LOCATION: (1)...(1308)
228 <400> SEQUENCE: 5
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231 1      5      10      15
233 cgc ttc ctg gcc ctc gtt tcc tgg gac atc cct ggg gct aga gca ctg      96
234 Arg Phe Leu Ala Leu Val Ser Trp Asp Ile Pro Gly Ala Arg Ala Leu
235      20      25      30
237 gac aat gga ttg gca agg acg cct acc atg ggc tgg ctg cac tgg gag      144
238 Asp Asn Gly Leu Ala Arg Thr Pro Thr Met Gly Trp Leu His Trp Glu
239      35      40      45
241 cgc ttc atg tgc aac ctt gac tgc cag gaa gag cca gat tcc tgc atc      192
242 Arg Phe Met Cys Asn Leu Asp Cys Gln Glu Glu Pro Asp Ser Cys Ile
243      50      55      60
245 agt gag aag ctc ttc atg gag atg gca gag ctc atg gtc tca gaa ggc      240
246 Ser Glu Lys Leu Phe Met Glu Met Ala Glu Leu Met Val Ser Glu Gly

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247	65		70		75		80	
249	tgg aag gat gca ggt tat gag tac ctc tgc att gat gac tgt tgg atg	288						
250	Trp Lys Asp Ala Gly Tyr Glu Tyr Leu Cys Ile Asp Asp Cys Trp Met							
251		85 90 95						
253	gct ccc caa aga gat tca gaa ggc aga ctt cag gca gac cct cag cgc	336						
254	Ala Pro Gln Arg Asp Ser Glu Gly Arg Leu Gln Ala Asp Pro Gln Arg							
255		100 105 110						
257	ttt cct cat ggg att cgc cag cta gct aat tat gtt cac agc aaa gga	384						
258	Phe Pro His Gly Ile Arg Gln Leu Ala Asn Tyr Val His Ser Lys Gly							
259		115 120 125						
261	ctg aag cta ggg att tat gca gat gtt gga aat aaa acc tgc gca ggc	432						
262	Leu Lys Leu Gly Ile Tyr Ala Asp Val Gly Asn Lys Thr Cys Ala Gly							
263		130 135 140						
265	ttc cct ggg agt ttt gga tac tac gac att gat gcc cag acc ttt gct	480						
266	Phe Pro Gly Ser Phe Gly Tyr Tyr Asp Ile Asp Ala Gln Thr Phe Ala							
267		145 150 155 160						
269	gac tgg gga gta gat ctg cta aaa ttt gat ggt tgt tac tgt gac agt	528						
270	Asp Trp Gly Val Asp Leu Leu Lys Phe Asp Gly Cys Tyr Cys Asp Ser							
271		165 170 175						
273	ttg gaa aat ttg gca gat ggt tat aag cac atg tcc ttg gcc ctg aat	576						
274	Leu Glu Asn Leu Ala Asp Gly Tyr Lys His Met Ser Leu Ala Leu Asn							
275		180 185 190						
277	agg act ggc aga agc att gtg tac tcc tgt gag tgg cct ctt tat atg	624						
278	Arg Thr Gly Arg Ser Ile Val Tyr Ser Cys Glu Trp Pro Leu Tyr Met							
279		195 200 205						
281	tgg ccc ttt caa aag ccc aat tat aca gaa atc cga cag tac tgc aat	672						
282	Trp Pro Phe Gln Lys Pro Asn Tyr Thr Glu Ile Arg Gln Tyr Cys Asn							
283		210 215 220						
285	cac tgg cga aat ttt gct gac att gat gat tcc tgg aaa agt ata aag	720						
286	His Trp Arg Asn Phe Ala Asp Ile Asp Asp Ser Trp Lys Ser Ile Lys							
287		225 230 235 240						
289	agt atc ttg gac tgg aca tct ttt aac cag gag aga att gtt gat gtt	768						
290	Ser Ile Leu Asp Trp Thr Ser Phe Asn Gln Glu Arg Ile Val Asp Val							
291		245 250 255						
293	gct gga cca ggg ggt tgg aat gac cca gat atg tta gtg att ggc aac	816						
294	Ala Gly Pro Gly Gly Trp Asn Asp Pro Asp Met Leu Val Ile Gly Asn							
295		260 265 270						
297	ttt ggc ctc agc tgg aat cag caa gta act cag atg gcc ctc tgg gct	864						
298	Phe Gly Leu Ser Trp Asn Gln Gln Val Thr Gln Met Ala Leu Trp Ala							
299		275 280 285						
301	atc atg gct gct cct tta ttc atg tct aat gac ctc cga cac atc agc	912						
302	Ile Met Ala Ala Pro Leu Phe Met Ser Asn Asp Leu Arg His Ile Ser							
303		290 295 300						
305	cct caa gcc aaa gct ctc ctt cag gat aag gac gta att gcc atc aat	960						
306	Pro Gln Ala Lys Ala Leu Leu Gln Asp Lys Asp Val Ile Ala Ile Asn							
307		305 310 315 320						
309	cag gac ccc ttg ggc aag caa ggg tac cag ctt aga cag gga gac aac	1008						
310	Gln Asp Pro Leu Gly Lys Gln Gly Tyr Gln Leu Arg Gln Gly Asp Asn							
311		325 330 335						

Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/993,059

DATE: 12/06/2001

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Input Set : N:\jumbos\993059.txt

Output Set: N:\CRF3\12062001\I993059.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application Number
L:2297 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:35
L:2297 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:35
L:2297 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35